Describing Research Development: A First Step

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ABSTRACT

Research development is increasingly recognized as a distinct field of employment. Practitioners currently self-identify as research development professionals based on their responsibilities or move into roles that have already been defined as being part of this field. The only professional organization in the United States for persons whose responsibilities have been defined as being in the field, the National Organization of Research Development Professionals (NORDP), just celebrated its tenth anniversary. As research development is a reasonably new realm of professional activity, the full extent of practitioner purposes and practices has yet to be delineated. To address the need for empirically-based understandings, an investigation of what research developers do was undertaken using the only known corpus that directly describes research development, the job descriptions in research development position announcements. Content analysis of this material was completed as the initial step in a multistage investigation that will address type, scope, and scale questions to facilitate a more formalized understanding of research development. The intention is to produce evidence-based understandings to "help us better understand what kinds of individuals, with what kinds of training, skills, and abilities, are best suited for various roles within research development, as well as what their professional trajectories are" (Stone, 2015, para. 5). This will facilitate differentiation from other areas of professional practice, like research administration, and "might improve our capacity to recruit, retain, and provide succession planning and longer-term career paths...in research development" (Stone, 2015, para. 5).

INTRODUCTION

Research development is a relatively new field and "more and more institutions are establishing research development offices or expanding existing offices" (Kuo, 2016 p. 2). Those involved currently selfidentify as research development professionals or move into roles that have already been defined as being part of the field. The only professional organization in the United States for persons whose responsibilities have been labeled as research development is the National Organization of Research Development Professionals (NORDP). This organization celebrated its tenth anniversary in 2018, but is still dependent, in most areas, on professional opinion and anecdotal information to define the nature and scope of the field it represents (Kuo, 2016). Many persons who identify as research developers have backgrounds in research administration, a specialization with multiple professional organizations, professional journals, and a growing body of literature. Research development, with its limited history, has yet to reach a similar stage of development.

Purpose and Significance

As research development is a reasonably new realm of professional activity, the full extent of practitioner purposes and practices is yet to be delineated. Definitions have been offered and listings of activities

commonly considered as research development, as opposed to research administration or some other form of leadership/management, have been generated (NORDP, 2017; Wikipedia, n.d.). However, these are based in personal experience or on informal informationgathering rather than on information derived from research (Kuo, 2016). To address the need for empirically-based understandings, an investigation of what research developers do was undertaken using the only known corpus that directly describes research development: job descriptions contained in research development position announcements. Content analysis of this material, the results of which are presented in this article, was the initial step in a multi-stage investigation that addresses type, scope, and scale questions to facilitate a more formalized understanding of research development. The four-part study will offer the first evidence-based description of research development, of roles held by individuals identified as research developers, and of structures and functions that characterize research development activity. Information of this type will aid both the research administration and research development communities as it will "help us better understand what kinds of individuals, with what kinds of training, skills, and abilities, are best suited for various roles within

research development, as well as what their professional trajectories are like...[and] might improve our capacity to recruit, retain, and provide succession planning and longer-term career paths...in research development" (Stone, 2015, para. 5).

Research Limitations and Delimitations

The absence of a well-defined and robust body of literature ascribed to research developers is a limitation of the study as it prevents a comprehensive review of publications to demonstrate common understandings and practices. A second limitation is the number of persons who identify as research developers who have self-defined. Asking a self-defined population to explain and justify their identity can result in circular argumentation. To address these limitations, the only known and substantial body of material describing research development, job descriptions prepared by colleges, universities, and research institutes, was employed as the data for the study. This approach moves away from self-definition to the use of professionally prepared descriptions of roles, responsibilities, and applicable skills desired for persons filling professional positions.

The research team elected to use a library of research development position announcements collected by the founder of NORDP, Dr. Holly J. Falk-Krzesinski—a delimitation of the study. This library was

developed from information shared with Falk-Krzesinski for distribution to members of the organization she founded, the National Organization of Research Development Professionals. The material included in the library came to Falk-Krzesinski in four different streams but was curated by her in one collection. Falk-Krzesinski was the only person involved in assessing descriptions for inclusion, was the sole curator of the library, and while she is confident all applicable position announcements were captured, admits it is possible one or more may have been missed (Falk-Krzesinski, personal correspondence, 2017). The library is described in more detail below (see the description of the data).

RESEARCH DEVELOPMENT LITERATURE

As an emerging field, literature relevant or even specific to research development is limited and difficult to find. It is spread across a wide variety of publications in multiple fields. Because this is the case, the NORDP membership agreed at the 2018 conference to establish a repository of publications in the field to facilitate exchange of ideas, research regarding research development, and publications in the field. This collection exists as a Mendeley group (Falk-Krzesinski, personal correspondence, May 9, 2018) and, as of June 20, 2018, contained 48 articles. The majority of these were published in or after 2008 (*n*=38), with others scattered across the preceding decade (one each in 1997, 1999, 2002, and 2004; two each in 2005, 2006, and 2007). They appear in journals devoted to business, economics, nursing, medicine, research administration, project management, research policy, physical and social science, engineering, evaluation, higher education, and information technology. In addition, several are white papers, special reports, and chapters in larger volumes or books, and one of the publications listed is a conference poster while another is a webpage. The general topics addressed can be described as collaboration and collaborative processes (including inter-institutional collaboration), faculty roles and responsibilities, faculty tenure and promotion, grant-making organizations and funding processes, interdisciplinary research, internal funding and grant review, project management, proposal development, research development, research support, and team science. Only one has defining research development as its focus, a Wikipedia webpage that was constructed by a group of research development professionals associated with NORDP.

Current Definitions of Research Development

One of the earliest definitions of research development was offered by Jacob Levin, NORDP's second president, in *The Chronicle of Higher Education*. He said research developers help "people formulate and finance their research" (Levin, 2011, p. 1) as

the "pursuit of large and complex projects...requires money and commitment beyond what many individual researchers are able to galvanize. [Thus] Researchdevelopment professionals serve a critical role in guiding...efforts, and helping to forge teams that span disciplinary bounds and institutions" (Levin, 2011, para. 3). This definition is very similar to the one offered by Kuo six years later, "Research development professionals use their scientific expertise and soft skills to help faculty members get funding and push research forward" (2016, p. 1).

A year after Levin's definition was published, another was offered in the American Sociological Association Footnotes. It is, "RD professionals catalyze new research, enable interdisciplinary partnerships, facilitate research excellence, and support a culture of collaboration....RD is a diverse profession driven by a multitude of needs and expertise" (Budescu & Walker, 2012, p. 1). NORDP offers the following as a definition on its website: "Research development encompasses a set of strategic, proactive, catalytic, and capacity-building activities designed to facilitate individual faculty members, teams of researchers, and central research administrations in attracting extramural research funding, creating relationships, and developing and implementing strategies that increase institutional competitiveness" (NORDP, n.d., para. 1). This definition is used in NORDP publications (NORDP, 2017) and

on the "Research Development" Wikipedia page (Wikipedia, n.d.). While both NORDP's and Budescu and Walker's definitions address more areas of activity than Levin's or Kuo's, they also use less than specific verbiage (i.e., facilitate, activities, attracting) and are heavily reliant on adjectives. The longest definition, the one used by NORDP and on the "Research Development" page on Wikipedia, and the material associated with it has carried, since February 2011, a banner on Wikipedia asking for "facts and attributions" (Wikipedia, n.d., para. 1). The banner says the material "promotes the subject in a subjective manner without imparting real information" (Wikipedia, n.d., para. 1). The Wikipedia style pages provide further explanation and a suggestion for improvement, stating that phrasing like that present in the description is "often used without attribution to promote the subject of an article, while neither imparting nor plainly summarizing verifiable information" (Wikipedia, 2018, para. 6). This pattern leaves the content open to three different forms of possible error—ad populum, consensus gentium, and appeal to status (The Quad, 2018). These are, respectively, acceptance of something because it is a popular conception, acceptance because a group or some perceived authorities advocate the position, or acceptance because the definition confers status. The latter two patterns are the most likely as a field emerges and leaders in

practice advocate for standing as a recognized specialization. As noted by a leader in the field of research development, David Stone (past president of NORDP), attempting to establish definitions and descriptions based on verifiable evidence is the only means of "formalizing research development in its structures, functions, and definitions" (Stone, 2015, para. 5) and providing "a standardized basis from which to create benchmarks, develop quality improvement guidance (and programming), devise assessment mechanisms, and establish best or promising practices within the profession" (Stone, 2015, para. 5). Activity of this type will "improve...performance as professionals and...connect what we do to constituent groups and institutions" served (Stone, 2015, para. 4).

RESEARCH QUESTIONS

An investigation of research development job announcements was undertaken to establish initial evidence-based understandings in the following areas.

- What is research development?
- What do people in research development do?
- What education, experience, knowledge, and skills are needed to be a research development professional?

Data: NORDP Position Announcement Library

A library of position announcements was begun when job descriptions were submitted for distribution to NORDP members (Falk-Krzesinski, personal correspondence, 2017). Material of this sort is regularly disseminated via the NORDP email list serve and it was for this purpose that the first queries were sent to Falk-Krzesinski. She captured the job descriptions in digital form when they were submitted and saved them to a hard drive. When Falk-Krzesinski ceased to be the person responsible for the NORDP list serve, she captured job descriptions as they were disseminated via the list serve. When the e-mailed announcement was a link to a webpage, Falk-Krzesinski followed the link and downloaded the text of the associated job description.

The second source of research development job descriptions for the NORDP library is the NORDP website. Position announcements are posted on the website but these do not always get distributed via the list serve. Falk-Krzesinski has compared, at least once a month since the job listings page was created on the NORDP website, the material captured from the list serve against the information posted on the NORDP job listings page and added to the library any postings not distributed via the list serve. While Falk-Krzesinski believes she captured

all the position announcements, it is possible that several were missed.

The third source of job descriptions is executive search firms. Falk-Krzesinski has been contacted by search firms many times in the last ten years for consultation in the development of job descriptions for research development positions. Some of these description are then distributed via the list serve and others are not but all of the job descriptions developed in consultation with Falk-Krzesinski have been added to the NORDP collection.

The final source of job descriptions has been research development practitioners. Individuals contact Falk-Krzesinski for assistance in revising their own job descriptions, generating a description of the responsibilities they have acquired that were never formally compiled in a job description, or generating descriptions of positions at their institution that they wish to open to applications. These descriptions also have been captured and included in the library whether or not they were disseminated via the NORDP list serve.

Not all of the job descriptions submitted to Falk-Krzesinski are included in the library. Part of her curation process is assessing which position announcements are for research development posts and which are for other areas of specialization. The job descriptions relevant to other specializations were also archived by Falk-Krzesinski but in different file folders. Examples of other job description categories

are Grant and Research Administration and Corporate and Foundation Relations. Falk-Krzesinski drew on her considerable experience in research development and with related specializations to determine which announcements should be considered as applicable to the field. She sought to err on the side of inclusion rather than exclusion and incorporated announcements in the NORDP research development job description library that seem to combine elements of one or more other areas of specialization with elements of research development.

Users of the job description library may note similarity or duplication between announcements. This is due, at least in part, to a small group of well-known research developers (e.g., members of NORDP's Board of Directors) consulting on job description development. Lists of roles filled and responsibilities assigned have been reused or revised rather than generated from scratch in each effort. Thus repetition may occur around certain job titles as standardized roles and areas of responsibility become more common in the field. In addition, Falk-Krzesinski and other parties refer to the expansive description of research development found on the NORDP website and on Wikipedia. The phrases found on the Wikipedia page have remained unchanged for a number of years and use of them as source material could also be reflected as similarity or repetition across job descriptions.

The digital files in the job description library facilitate approximate "time stamping" of the announcements. The year each was completed was included in the file name assigned by Falk-Krzesinski.

METHODOLOGY

The library of job descriptions, 442 distinct files in late fall of 2016, was made available to the investigative team by a member of NORDP's Board of Directors. To increase the functionality of the collection, a decision was made to rename each of the files. The naming rubric utilized was date followed by position title followed by institution or organization (e.g., 2016 Director of Research Development_Substantial State University). This allowed the files to be easily sorted by year, position title, and institution. As the project team wished for the files to be the sole source of information, dates included in the file names were those found in the announcement rather than the year noted in the original file name. This resulted in a fairly large set of announcements (n=140) with the designation ND (no date). The size of this subset may be related to descriptions having been developed to describe existing positions.

The position announcements were subjected to documentary content analysis using Provalis Research's QDA Miner software. The entire text of the announcement was open to analysis, and word frequency searches were completed,

but the program was also asked to search for and collect all references using words or phrases identified by the research team. The team then reflected on the resulting material. In some cases, it was decided that additional context was needed to interpret the intended use of the word or phrase of interest. In these cases, a member of the project team manually accessed each place the desired word was used in the entire library of position descriptions and harvested the clause or sentence in which it was found. This was done to make the intended purpose for the use of the key word or phrase evident. The project team then completed qualitative coding of the lists of clauses and sentences. In subsequent conversations, they compared codes developed individually and arrived at a negotiated classification for each use of a key word or topic. This codebook was used to summarize the nature and scope of topics of interest for which the clauses and/or sentences were gathered.

FINDINGS

Overview

The known dates for job descriptions included in the study extend from 2006 to the end of 2016. Of the 442 job descriptions, approximately one third (32%) did not

contain an indicator of the date the position was announced or a closing date that allowed the year to be identified. The extent to which the development of descriptions for positions already occupied influenced this is unknown.

There were 187 unique institutions included in the position announcement library. Fifty-nine percent of the institutions had only one job description in the library but 52% of the descriptions were from institutions who had four or more announcements in the library. These included frequent postings by R1: Doctoral University – Highest Research Activity (Carnegie Classification of Institutions of Higher Education, 2017) or similarly research-active institutions (Table 1).

When considering trends across time, only position descriptions dated 2010 or after were considered (n=294). It was not until 2010 that more than five positions were announced a year (Figure 1). In that year, the number of announcements tripled and from that point forward there was a steady growth in the number of position descriptions per year. Thus, there are adequate annual counts of position descriptions from 2010 on to allow analysis of patterns.

Table 1 Position Announcement Frequency by Institution

Institution	# Pos. Annoc.
North Carolina State University	13
Duke University	12
Northwestern University	12
University of California Irvine	12
University of Illinois at Urbana-Champaign	12
Texas Tech University	10
University of California Santa Barbara	10
Texas A&M University	9
University of Arizona	9
University of Massachusetts Amherst	9
Brown University	8
University of California San Francisco	8
University of Tennessee Knoxville	8
Harvard University	7
Iowa State University	7
Arizona State University	6
Memorial Sloan Kettering Cancer Center	6
Northeastern University	6
University of California Merced	6
University of Chicago	6
University of California Davis	5
University of Colorado	5

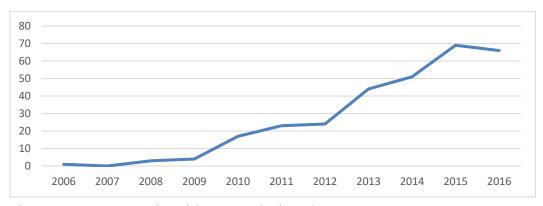


Figure 1. Frequency of Position Descriptions by Year

Position Titles

The position titles represented in the library included 44 unique nouns, yet 80% of the descriptions use one of 13 titles (Table

2). The two most frequently used nouns in the job titles, by count, were director and manager. These terms appeared in 27% of the job titles.

Table 2
Most Frequently Used Titles

Title (Nouns)	# Pos. Annc.	Percentage
Director	80	18%
Manager	40	9%
Coordinator	35	8%
Specialist	32	7 %
Officer	30	7 %
Associate Director	27	6%
Associate	22	5%
Grant Writer	22	5%
Administrator	17	4%
Associate Vice President	13	3%
Analyst	12	3%
Assistant Director	12	3%
Proposal Developer	10	2%

As would be expected, and especially in a developing field, job titles in position announcements vary and the frequency of their use fluctuates from year to year. The five most frequently occurring words in job titles—director, manager, coordinator,

specialist and officer—appear in different frequencies from year to year with a notable spike in the use of the term director in 2013

(Figure 2). Thirty-four percent of the descriptions dated in that year used the label "director" in a position title.



Figure 2. Title Use in Position Descriptions by Year

Educational Requirements

A topic of interest to the project team was the educational requirement specified in position announcements. Consideration of this topic was complicated by job descriptions that contained more than one educational requirement (e.g., Ph.D. and three years of experience or master's degree and five years of applicable experience), yet several distinct patterns emerged (Table 3). Advanced degrees were regularly listed as a

qualification (master's degree, 40%; doctorate, 33%) and 140 of the position descriptions included a preferred level of education, all of which specified an advanced degree (i.e., master's or doctorate). Plotting by year revealed that advanced degrees have been of interest since at least 2010 and that interest in recruiting Ph.D.-qualified personnel may be increasing (Figure 3).

Table 3
Education Requirements in Position Descriptions

Education Requirement	# Pos. Annc.	Percentage
Bachelors	117	40%
Masters	178	40%
Doctorate	146	33%
Preferred degree referenced	140	32%

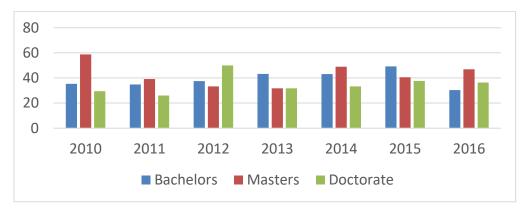


Figure 3. Education Requirement as Percentage of Positions Descriptions, Posted By Year

Years of Experience

A minimum level of practical experience was specified in 60% of the job descriptions (*n*=262). Like the educational requirements, the presence of more than one education and experience combination (e.g., Ph.D. and three years of experience or master's degree and five years of applicable experience)

complicated the analysis. The majority of announcements designating years of experience, 68%, stated the minimal standard as between three and five years with five being the most frequently used figure (Figure 4).

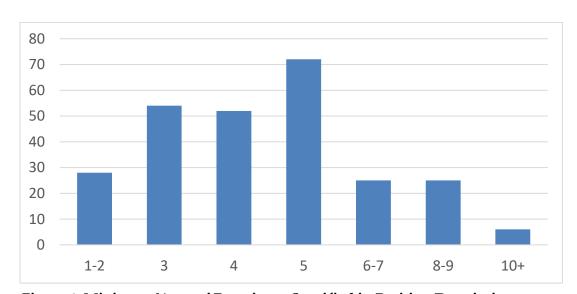


Figure 4. Minimum Years of Experience Specified in Position Descriptions

Of the 13 terms frequently used in job titles, nine staff roles had usage counts

above a natural break in the data and a sufficient number of uses to facilitate

comparison (Table 4). Associate Vice President was excluded as an administrative role and the point at which the natural break in the tallies occurred (Table 2). Positions with the word director in the title required the most experience (>4.8 years). Positions using associate, manager, officer, specialist, and administrator as labels formed a second cluster, with requested experience averaging between 4 and 4.5 years. Grant writers and coordinator positions required the least experience (>3.4 years).

Table 4
Minimum Years of Experience by Title

William Tears of Experience by Title					
Position Title	Average Minimum Years				
Coordinator	3.44				
Grant Writer	3.50				
Administrator	4.00				
Specialist	4.07				
Officer	4.11				
Manager	4.31				
Associate	4.31				
Associate Director	4.88				
Director	5.65				

Responsibilities of and Terminology related to Research Developers

Frequently used terms were gathered from the position descriptions with the intention of identifying key responsibilities. From these, two phrases were selected as topics around which activity occurred: funding opportunities and proposal development. Other areas of responsibility were present but with less consistency in wording and intent. As this was the case and the nature of the institutions, their intentions for a position, and their

circumstances impacted responsibilities to be assumed, the project team chose to investigate only the two strongly identifiable areas of responsibility. A third phrase, research development, also was considered in hope that some defining characteristics might be identified.

Funding Opportunities. The uses of the phrase funding opportunities focused on finding and disseminating information. This phrase occurred in job announcements of all types, even those with the lowest threshold of experience (Table 5).

Table 5
Presence of Responsibilities related to Funding Opportunities in Position Descriptions

Job Title	Title Freq.	FO Noted	% w/ FO Resp.
Director	80	41	51%
Manager	40	15	38%
Coordinator	35	18	52%
Specialist	32	30	94%
Officer	30	12	40%
Associate Director	27	12	44%
Weighted Average of Above	244	128	<u>52%</u>

The responsibility to find funding opportunities was common to all job descriptions. Notation of responsibility to disseminate this type of information also appeared across all job titles. While this is an interesting finding, the limited number of descriptions in some job title categories that included reference to funding opportunities would not support further analysis.

Proposal Development. A second notable phrase was proposal development. The uses of this phrase (*n*=268), and wording in the immediate context, were extracted from the position announcements. Interestingly, none sought to define what was meant by proposal development, anticipating familiarity on the part of the audience. The phrase was used to denote an area of professional activity (*n*=241), in a position title (*n*=18), and in the names of

offices or organizational entities (*n*=24), with two or more of these patterns occurring in the same announcement 16 times. Each use was inductively coded by two members of the project team based on its meaning in context; their coding was reconciled in teleconferences; and the resulting codes were grouped. Categorical labels were assigned for each of the groupings. These labels are: (1) distinct and accepted activity, (2) experience-based, (3) involves known competencies, (4) assistive, (5) process planning/managing, (6) patterned, (7) uses tools, (8) is interactive, and (9) can involve challenge. These can be combined as a rough definition of proposal development activity as practiced by research developers. That is, proposal development activity in research development is an undertaking that relies on the experience of the practitioner,

applicable skill sets, and the use of relevant tools to assist an individual or team in planning, managing, and completing the development of material that responds to a call for proposals, including overcoming practical and relational challenges as they arise. While this initial effort is less than specific in some ways, it does contain the primary elements represented in the position announcements, establishing it as evidence-based. Further investigation, like survey or focus group research, will be required to increase specificity.

Defining Research Development. To understand the scope and nature of research development, as described in the position announcements, all clauses using the phrase were collected. The phrase was used 149 times as an undefined label – 114 times in job titles (e.g., Director of Research Development), and 55 times in the names of work units (e.g., Research Development Office). As these patterns did not provide defining characteristics, the team turned to the terms immediately associated with research development in the excised clauses (e.g., support of research development, possessing five years of research development experience). The result was a list of 50 terms and the number of times they occurred in conjunction with the phrase research development. Twenty-one of the 50 terms were used once.

The 20 most frequently employed words were grouped in categories and each category assigned a summarizing label.

Once this was completed, the remaining terms were added to determine whether the outline formed with the most frequently employed descriptors also would support the less frequently used set. Adjustments to the descriptive labels or reordering of groups was performed as necessary to arrive at logically consistent groupings. The result of this process was seven categories summarizing the words associated in the position announcements with use of the phrase research development. These labels were: (1) distinct, (2) organized, (3) personbased, (4) knowledge-based, (5) interactive, (6) targeted, and (7) measurable. This group represents the major concepts associated with the phrase research development in the position descriptions and, along with the 50 terms they summarize, suggest that an initial empirically-based definition of research development might be as follows. Research development is the application of personal skill and insight, best-practice and theory from a variety of disciplines, and practical tools in interactive, organized patterns targeting preparation for and encouragement and support of investigations, planned interventions, and analysis of these processes for [purpose/purposes].

When an earlier and slightly longer version of this definition was shared at the 2017 NORDP national conference, major objections voiced were the absence of the word "strategic" and of a reference to responsibility for institution planning. The

term "strategic" was not included in the definition as it did not occur in any of the clauses in which the phrase research development was used in the library of position announcements. That does not mean it should not be considered applicable. Rather, the evidence used to formulate this initial empirically-based definition did not support including the word. The same can be said for a reference to institutional planning. A third objection was that the suggested definition included no statement of overall purpose. The NORDP definition states the purpose of research development is "attracting extramural research funding, creating relationships, and developing and implementing strategies that increase institutional competitiveness" (NORDP, n.d., p. 1). The definitions offered by Levin (2011) and Kuo (2016) support the first clause of NORDP's identification of the purposes of research development but Budescu and Walker (2012) did not ascribe a purpose. Like the other "missing" ideas, a purpose was not ascribed as the evidence used for this study did not suggest one. Uses of the words agenda, twice in 442 position descriptions, goals and needs, once each, is the nearest the material extracted from the position announcements came to identifying purpose in the clauses and sentences in which the phrase research development occurred. It is possible that purposes are noted in the position announcements but they were not accessed

by the methods deployed in this study. The early-stage definition offered does not argue against one or more reasonable and applicable purposes for the practice of research development but it does not state one since the data analysis did not support the inclusion of one.

CONCLUSION

Research development is an increasingly recognized area of professional practice. Processes, structures, and resources in the field are developing, as evidenced by the patterns present in the position announcements, the presence of a national organization and conference, the material on NORDP's website, and the list of publications in the field now posted on Mendeley. Both as part of this activity and because of it, many institutions of higher education recognize and categorize individuals as professionals in this field and these institutions also recognize research development as having a variety of roles and responsibilities. As is common in developing fields, consistent patterns and strong evidence supporting them remain to be developed. Yet, specialized sets of responsibilities requiring experience and expertise in the field, as evidenced by job titles and requirements, are being advertised and some patterns are emerging, such as preferred titles and associated levels of experience as well as a preference for practitioners holding advanced degrees. Reaching more and more robust

conclusions will require further investigation. This has already begun as a survey of the NORDP membership was completed in the spring of 2017. Data from that project, the second step in the authors' multi-stage investigation, has been analyzed and described in a presentation at the 2018 NORDP national conference. Publication of those results is planned but they can by no means be considered the final word. They continue initial steps in

understanding the nature and scope of a relatively new area of professional practice with marked diversity in roles, responsibilities, and goals. Many other documentary, quantitative, and qualitative investigations will be necessary before a panoramic view of research development and detailed understanding of elements and purposes in each area of practice can be achieved.

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